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WIDE CUT HARVESTER HAVING ROTARY CUTTER BED

Abstract <sup>^</sup> OF THE DISCLOSURE

5 A harvester which uses a rotary style cutter bed has  
a series of rotary cutters extending across the path of  
travel of the machine and rotatable about individual  
upright axes. Part of the cutter bed is a flat gear case  
containing a train of intermeshed spur gears that serve to  
10 distribute power between the cutters above the gear train.  
Each end of the gear case has a hollow, gearless extension  
welded thereto which supports at least one additional  
outboard cutter that receives its driving power exterior-  
ally of the gear case. One embodiment uses a mechanical  
15 drive to bring power to the upright shaft of the cutter  
having the first spur gear so that the cutters with gears  
receive all their power from the driven cutter. The  
outboard cutters not having gears are driven by exterior,  
over-the-top drive mechanism coupled with the shafts of the  
first and last geared cutters, such drive mechanism alter-  
20 natively taking the form of timing belts with timing  
sheaves, chains and sprockets, gear box and universal joint  
couplings or a spur gear train. As an alternative to a  
mechanical drive, the cutter bar may utilize a pair of  
hydraulic motors coupled with the shafts of the first and  
25 last cutters having gears. All of the gears in the gear  
case remain positively enmeshed with one another in the  
gear train, so that the two hydraulic motors share the  
total load of driving the cutter bed and such loading is  
balanced between the two hydraulic motors, prolonging the  
30 useful life of the gears and other drive components. The  
added on, outboard cutters are driven over the top using  
timing belts, timing sheaves, universal couplings or a spur  
gear train.